

WARM-UP Solve and Graph

1. $6x - 5 < 7$ OR $8x + 1 > 25$

2. $-3 \leq -1 - 2x \leq 5$

~~$13 \leq a$~~ $13 \leq a \leq 14$

Write an inequality that would describe the typical age of an 8th grader. $12 \leq x \leq 15$

34x28

6.4

Absolute Value Equations



Absolute Value Equations will always have 2 solutions.

Just like: $|x| = 7$
means

$$x = 7 \text{ and } x = -7$$

~~And:~~ $|ax + b| = c$
means

$$ax + b = c \text{ and } ax + b = -c$$

Let's try this one

$$|2x + 1| = 11$$

$$|11| = 11$$

$$2x + 1 = 11$$

$$-1 \quad -1$$

$$\underline{2x = 10}$$

$$\underline{2}$$

$$x = 5$$

$$x = 5, -6$$

$$x = -6, 5$$

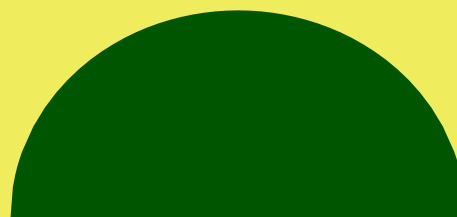
$$2x + 1 = -11$$

$$-1 \quad -1$$

$$\underline{2x = -12}$$

$$\underline{2}$$

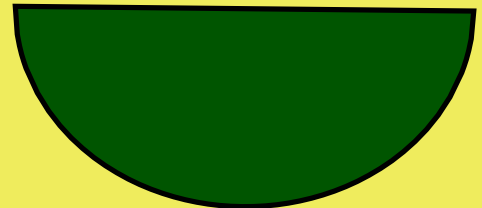
$$x = -6$$



So you're a pro now? How 'bout this one?

$$|13 - 4x| = 3$$

$$13 - 4x = 3$$



$$x = 4 \text{ and } x = 2.5$$

Let's kick it up a notch . . .

Be careful here!

$$|2x + 3| - 4 = 21$$

$$+4 \quad +4 \quad 2x = \frac{-28}{2}$$

$$|2x + 3| = 25$$

$$2x + 3 = 25$$

$$-3$$

$$2x = 22$$

$$x = 11$$

$$2x + 3 = -25$$

$$-3$$

$$x = 11 \text{ \& } -14$$

$$x = 14$$

Did I hear someone say, "Bring it!"?

$$|7 - 4x| - 4 = 14$$

$$x = -2\frac{3}{4} \text{ \& } 6\frac{1}{4}$$

I guess you are ready for the
opportunity to show your
MAD SKILLS!!!